to the American Association for the Advancement of Science (January, 1937).

This does look like the discovery of the missing link between the lifeless and the living. But at present it may be said that the multiplication of the virus in the plant is not conclusive evidence that the virus lives. An alternative view is that the living tissues of the plant, under the influence of this non-living chemical, are stimulated by it to produce more of it. I do not know of any serious objection to this interpretation. And the increase of quantity of the virus in the plant seems to be hitherto the only good ground for regarding it as in any sense alive. Another possibility, only slightly different, if at all, is that the virus molecule becomes incorporated in some colloidal aggregate of the plant's protoplasm and thus, as a constituent of the living protoplasm, acquires that power of growth or self-increase by selective assimila-tion which, as I have noted again and again, seems to be the most fundamental peculiarity of living things. And here I support this proposition by citing from a recent newspaper article by Prof. J. B. S. Haldane, a bio-chemist of high standing; for I know well that a large proportion of my readers will point to the growth of crystals, saying they can see no difference between their form of growth and that of living tissue. He wrote, *a propos* the tobacco virus: ' The most reliable test of whether a thing is alive is whether it can reproduce its like indefinitely if given the proper food/

That the interpretation here

suggested is the true one, rather than the view that the virus itself possesses the power of self-increase by assimilation, is supported by the fact that it has proved impossible hitherto to cultivate the virus *in vitro* as many forms of bacteria may be culti-